Congress of the United States
Washington, DC 20515

October 8, 2015

The Honorable Rob Bishop
Chairman
House Committee on Natural Resources
1324 Longworth House Office Building
Washington, D.C. 20515

Dear Chairman Bishop:

We write to urge you to hold a hearing examining uses of public lands that may reduce greenhouse gases (GHG) in the atmosphere. Thank you for holding the hearing "Increasing Carbon Soil Sequestration on Public Lands" in the Subcommittee on Public Lands and Environmental Regulation (now the Federal Lands Subcommittee) on June 25, 2014.

Our public lands serve many purposes, including plant and wildlife habitat, recreation, grazing, mining, and energy production. While some of these activities may help reduce our nation's GHG emissions, others increase them. A 2010 report showed that public lands in the contiguous 48 states were contributing 4.5 times more carbon to the atmosphere than these lands were able to absorb.[1] One of the largest sources of GHGs is taxpayer-owned gas, oil, and coal extracted from federal lands and waters by private companies.[2] To truly combat climate change, we need to understand how our public lands can be managed in a way that contributes to the solution, not the problem.

Carbon Sequestration

Our public lands play a key role in mitigating climate change by sequestering GHG emissions such as CO_2. The amount of carbon sequestered varies by ecosystem and land management practices. Research conducted by the Department of the Interior and U.S Geological Survey shows that Western forests are responsible for 69% of the total carbon sequestration that occurs in the U.S. while grasslands and shrublands capture 25%.[3] Wetlands and arid lands are also important ecosystems in this process. While wetlands capture the most carbon per unit, at 40.1 grams per square meter, they only comprise 11 percent of the U.S. land mass, and less than 1 percent in the West.[4] Grasslands and shrublands, while capturing the least amount of carbon per unit, cover 60 percent of land area and are the most prevalent ecosystem.[5] Due to the prevalence of these arid lands in public ownership, land use and management focused in these areas can have significant impacts on the overall carbon sequestration capabilities of public lands.[6]

Land management practices greatly affect the rates of carbon sequestration. For example, a decline in forest clear-cutting in the Pacific Northwest over the past thirty years, due to policy changes such as the Northwest Forest Plan, has led to an increase in carbon sequestration, per unit of area (from the loss of 48 grams of carbon stock per square meter per year in the 1980s to a carbon sink of 136 grams of carbon per square meter per year in the 2000s).[7]

Livestock grazing also impacts the way lands sequester carbon. On grasslands and shrublands, the most prevalent ecosystem in the Western U.S., research shows[8] [9] [10] that, "Heavy grazing during extended seasons may cause changes in species composition ... which may lead to a reduced amount of above ground biomass, accelerated soil decomposition, and a loss of soil organic carbon stock to the atmosphere."[11] Looking more deeply into this and other research may help guide grazing policies for maximization of carbon sequestration. For example, similar research suggests that, "Reducing (but not necessarily excluding) grazing intensity usually helps improve soil-carbon preservation and sequestration because there is more decomposed vegetation contributing to the soils."[12]

Finally, wildfire management is an important component of reducing GHGs, but the research is uncertain on how fire management of forests may affect carbon sequestration: "The mechanical fuel treatments were generally found to reduce fire severity, fire risks, and immediate combustion emissions[13] [14] [15]; however, their long-term effects on carbon sequestration in ecosystems were mixed."[16] The use of mechanical fuel treatments and forest thinning as a means to reduce emissions and increase carbon sequestration were found to be ineffective or counterproductive in the Pacific Northwest[17] [18] and the Northern Rockies[19], but beneficial in the Sierra Nevada in California.[20] Further research on how to best manage for fire as well as carbon sequestration should prove beneficial.

Carbon Emissions Reductions

Federal public lands house energy infrastructure that supplies approximately 30 percent of the U.S. annual energy production.[21] While more and more renewable energy is being added to the mix, fossil fuel production on public lands contributes significantly to GHG emissions. Fossil fuel energy sources are estimated to have contributed nearly a quarter of all energy-related U.S. GHG emissions.[22] Of these sources, coal on federal lands accounts for more than 57 percent of emissions. Methane releases from venting and flaring of onshore federal leases increased more than 51 percent between 2008 and 2013.[23] Moving toward a more strategic and forward-thinking approach to energy production could be the single biggest source of reductions in GHG emissions from public lands.

Understanding the changes in GHG emissions from public lands is vital to achieving a comprehensive public lands management strategy that helps address climate change. I stand ready to work with you to assemble a hearing that helps lay that groundwork.

Sincerely,

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Member of Congress

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[1] Center for American Progress. 2015. Cutting Greenhouse Gas from Fossil-Fuel Extraction on Federal Lands and Waters. Retrieved from: https://cdn.americanprogress.org/wp-content/uploads/2015/03/PublicLandsEmissions-brief.pdf. Accessed on July 6, 2015.
[2] Ibid.
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[4] Ibid.
[5] Ibid.
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